STRATEGY 4:

Develop Commercialization Opportunities in Marine and Animal Biotechnology

Strengthened Marine Biotechnology Capabilities

Few states are as well positioned as North Carolina to target, develop and gain from fresh- and salt-water resources, land-based and sea-based. Increasing attention to marine biotechnology and aquaculture is good strategy and has not been addressed in proportion to its full economic potential.

Continued development of marine biotechnology and a Biotechnology Center sponsored Center of Innovation will serve all public and private parties statewide working for fresh- and salt-water capabilities development. Development efforts will strengthen commercialization of viable applications built on existing university and private research expertise, infrastructure and technology transfer. This targeted effort serves as a foundation for assisting public and private parties who work for fresh- and salt-water economic development. Areas of attention will include: economic development and marketing studies; a development plan for sectors and areas of application, from aquaculture to marine-based pharmaceuticals; enabling technologies; analysis of markets and international competitiveness; and support of shared resource, policy and funding needs.

Establishing a North Carolina Aquaculture Consortium will provide shared focus for a potentially large sector matched to state resources and a worldwide need for marine resources and food. The Consortium will provide economic verification, state policy commitment, coordination and functional assistance to projects, sites and growers. It will assemble and serve as a model for collaborations and partnerships.

Strengthened Animal Biotechnology Capabilities

The intersection of biotechnology with animals – their health, growth, characteristics and products – is still relatively new and unfolding. A state strong in turkey, swine and poultry production, in research and veterinary capabilities, and in company leadership is well advised to capture opportunity and expand gain.

North Carolina has to date not targeted animal agriculture as an area for deliberate policy, economic return and development. Benefit to producers, processors and agricultural communities can accrue, as can leadership in careful biotechnology application, attendant environmental and societal issues and commercialization. Merging need with opportunity and strengthening capabilities requires an organized, multi-party, concerted effort. A two-part framework comparable to that seen above for marine and aquaculture is proposed.

First, convene parties and shape objectives through an Animal Biotechnology Consortium. The convening party can begin the process of evaluating potential ideas for commercialization and development opportunities in animal agriculture and biotechnology.

Second, formulate a new animal biotechnology program – be it project or center – to organize and accelerate the science, policies, application and product outcomes of animal biotechnology. However constituted, the program would work for multi-party projects, partnerships, attention to issues and junctures of animal products with human health, protein production, nutrition and niche markets. Also key to success will be an evaluation and organization of funding mechanisms to potentially fund commercialization models for animal biotechnology industry and sector development.

Responsibility for initial implementation will be determined by a member of the Agricultural Biotechnology Advisory Committee and shared with partners around the state.